85-333

No.

Supreme Court, U.S.
FILED
AUG 15 1985
JOSEPH F. SPANIOL, JR.
CLERK

IN THE

Supreme Court of the United States

OCTOBER TERM, 1985

MODINE MANUFACTURING CO.,
Petitioner,

v.

U.S. ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

APPENDICES TO THE PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE THIRD CIRCUIT

RICHARD J. KISSEL
JEFFREY C. FORT
Counsel of Record
M. THERESE YASDICK
MARTIN, CRAIG, CHESTER & SONNENSCHEIN
115 S. LA SALLE STREET
SUITE 2400
CHICAGO, IL 60603
(312) 368-9700
Counsel for Petitioner Modine Manufacturing Co.

TABLE OF CONTENTS

		PAGE
A.	JUDGMENT AND ORDER OF THE U.S. COURT OF APPEALS FOR THE THIRD CIRCUIT IN *MODINE MANUFACTURING CO. v. U.S. ENVIRONMENTAL PROTECTION AGENCY,* CASE NO. 84-3382 (MAY 17, 1985).	A-1
B.	ENVIRONMENTAL PROTECTION AGENCY'S FINAL RULE CONCERNING PRETREATMENT STANDARDS FOR THE METAL FINISHING POINT SOURCE CATEGORY (40 C.F.R. PART 433) (48 FED. REG. 32462-32488) (JULY 15, 1983) (PERTINENT PROVISIONS)	A-3
C.	SECTION 301(b) OF THE CLEAN WATER ACT, 33 USC § 1311(b) (1976 & SUPP. V. 1981)	A-42
D.	SECTION 304(b) OF THE CLEAN WATER ACT, 33 USC § 1314(b) (1976 & SUPP. V. 1981)	A-44
E.	SECTION 307(b) OF THE CLEAN WATER ACT, 33 USC § 1317(b) (1976 & SUPP. V. 1981)	A-47
F.	40 C.F.R. § 403.13	A-48

UNITED STATES COURT OF APPEALS
For the Third Circuit

No. 84-3382

MODINE MANUFACTURING COMPANY,
Petitioner

v.

WILLIAM D. RUCKELSHAUS, Administrator,
UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY,
and UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

On Petition for Review of Final Rule of
United States Environmental Protection Agency

Argued May 14, 1985

Before: HUNTER AND SLOVITER, *Circuit Judges,*
and COHEN, *District Judge**

[A.]

JUDGMENT ORDER

After consideration of all contentions raised by both parties, it is

ADJUDGED and ORDERED that the Petition for Review of Final Rule of the United States Environmental Protection Agency be and is hereby denied.

---

* Hon. Mitchell H. Cohen, United States District Court for the District of New Jersey, sitting by designation.

Costs taxed against petitioner.

By the Court,

/s/ DOLORES K. SLOVITER
Circuit Judge

Attest:

/s/ BETTY J. ROBINSON
Deputy Clerk

Dated: May 17, 1985

Certified as a true copy and issued in lieu of a formal mandate on June 10, 1985.

Test:

Chief Deputy Clerk, U.S. Court of Appeals for the Third Circuit

[B.]

Federal Register, Vol. 48, No. 137

Friday, July 15, 1983

Rules and Regulations

Pp. 32462-32488

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 413 and 433

[OW-FRL-2383-7]

Electroplating and Metal Finishing Point Source Categories; Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This regulation limits the pollutants that electroplating/metal finishing facilities may discharge to waters of the United States or to publicly owned treatment works (POTW). The Metal Finishing Regulations provide effluent limitations based on "best practicable technology" and "best available technology" and establish new source performance standards and pretreatment standards under the Clean Water Act. In addition, this rule amends the pretreatment standards for existing sources for the Electroplating Point Source Category.

The preamble summarizes the legal authority, background, technical and economic bases, and other aspects of the regulation as well as a summary of comments on the proposed regulation and on the record supporting the proposed regulation. The abbreviations, acronyms, and other terms used in the preamble are defined in Appendix A. (See "Supplementary-Information" below for complete table of contents).

The final rule is supported by EPA's technical conclusions detailed in the *Development Document for Effluent Limitations Guidelines and Standards for the Metal Finishing Point Source Category,* June, 1983. The Agency's economic analysis is found in *Economic Analysis of Effluent Standards and Limitations for the Metal Finishing Industry,* June 1983. Further supporting materials are filed in the record supporting this rulemaking.

DATES: In accordance with 40 CFR 100.01 (45 FR 26048) this regulation shall be considered issued for the purposes of judical review at 1:00 p.m. Eastern time on July 29, 1983. These regulations shall become effective August 29, 1983.

The compliance date for the BAT regulations is as soon as possible, but no later than July 1, 1984.

The compliance date for New Source Performance Standards (NSPS) and Pretreatment Standards for New Sources (PSNS) is the date the new source begins operations. The compliance date for Metal Finishing Pretreatment Standards for Existing Sources (PSES) is February 15, 1986 for metals and cyanide. Metal Finishing PSES establishes two levels of toxic organic control; the less stringent must be met by June 30, 1984 for most plants and by July 10, 1985 at plants also subject to Part 420 (Iron and Steel); the more stringent must be met by February 15, 1986. In addition, Electroplating PSES requires toxic organic control by July 15, 1986.

Under Section 509(b)(1) of the Clean Water Act judicial review of this regulation can be obtained only by filing a petition for review in the United States Court of Appeals within 90 days after these regulations are considered issued for the purposes of judicial review. Under Section 509(b)(2) of the Clean Water Act, the requirements of the regulations may not be challenged in later civil or criminal proceedings brought by EPA to enforce these requirements.

Reporting provisions in 40 CFR 413.03 and 433.12 will be reviewed by OMB under the paperwork reduction act and are not effective until approved.

* * * * *

I. Legal Authority

This regulation is being promulgated under the authority of Sections 301, 304, 306, 307, 308, and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1251 *et. seq.*, as amended by the Clean Water Act of 1977, Pub.L. 95-217) (the "Act") and as further amended. This regulation is also being promulgated in response to the Settlement Agreement in *Natural Resources Defense Council, Inc.* v. *Train,* 8 ERC 2120 (D.D.C. 1976), as modified, 12 ERC 1833 (D.D.C. 1979), modified by Order dated October 26, 1982.

II. Background

* * * * *

C. Overview of the Industry

There are 13,500 plants in the electroplating/metal finishing industry. Many discharge wastewaters from several metal finishing operations other than, and in addition to, electroplating. Part 413 (electroplating) currently applies only to flows from the six specified electroplating processes. These Part 433 (metal finishing regulations) will apply to those electroplating streams and also to wastestreams from most other metal finishing operations within the same plants. The Part 433 PSES will apply only to plants already covered by Part 413; however Part 433 will often cover additional wastewater within the same plants. Thus, the Part 433 limits on discharge of toxic metals, toxic organics, and cyanide will apply to most facilities in the electroplating/metal finishing industry.

The industry can be divided into the sectors indicated on Table I. Facilities are either "captives" (those which in a calendar year own more than 50% (area basis) of the materials undergoing metal finishing); or "job shops" (those which in a calendar year do not own more than 50% (area basis) of material undergoing metal finishing).

Captives can be further divided by two definitions: "integrated" plants are those which, prior to treatment, combine electroplating waste streams with significant process waste streams not covered by the electroplating category; "non-integrated" facilities are those which have significant wastewater discharges only from operations addressed by the electroplating category. Many captives (50%) are "integrated" facilities. Whereas captives often have a complex range of operations, job shops usually perform fewer operations. In theory job shops can be divided like captives; in actuality, however, approximately 97% of all job shops in this industry are "non-integrated".

Finally, the entire industry can be divided into "direct" and "indirect" dischargers. "Directs" discharge wastewaters to waters of the United States and are subject to NPDES permits incorporating BPT, BAT, and BCT limitations or NSPS. "Indirects" discharge to POTWs and are subject to PSES or PSNS.

As discussed above, the electroplating/metal finishing industry is currently covered by Part 413 PSES for the Electroplating Category promulgated on September 7, 1979, and amended on January 28, 1981. The effect of today's amendments is to create a new category—Metal Finishing (Part 433)—and to shift *most* electroplaters to it, replacing their current PSES with new limits which apply uniformly to discharges from their electroplating and other metal finishing operations. This meets industry's requests for equivalent limits for process lines often found together and greatly reduces the need to rely on the Combined Waste Stream Formula for integrated metal finishing facilities. Direct discharger and new

source requirements are also being issued as part of the metal finishing regulations.

Indirect discharging job shop electroplaters and independent printed circuit board manufacturers, however, would be left under the existing Part 413 PSES for Electroplating and are exempted from Part 433. This is consistent with a 1980 Settlement Agreement in which the National Association of Metal Finishers (NAMF), and the Institute for Interconnecting and Packaging Electronic Circuits (IIPEC) agreed not to challenge the Part 413 PSES in return for the 1981 amendments and EPA's commitment that the Agency did not intend to develop significantly more stringent standards for those plants for the next several years.

TABLE 1.—BREAKDOWN OF THE ELECTROPLATING/METAL FINISHING INDUSTRY

[Number of plants per sector 13,470]

	Job shops and IPCBM[1] (3,470)	Captive facilities (10,000)	
		Nonintegrated	Integrated
Indirect dischargers (10,561).	3,061 job & IPCBM indirect.	3,750 nonintegrated captive.	3,750 integrated captive.
Direct dischargers (2,909).	409 job & IPCBM directs.	(2)	(2).

[1] Independent printed circuit board manufacturers.
[2] 2,500 captive directs.

The Metal Finishing Category covers plants which perform one or more of the following six operations: electroplating, electroless plating, anodizing, coating (phosphating, chromat-

ing, and coloring), chemical etching and milling, or printed circuit board manufacture. If a plant performs any of those six operations then discharges from the 46 operations listed in Appendix C are covered by these standards.

In some cases another industrial category may cover wastewater discharges from a metal finishing operation. In such cases the more specific standards of the other Part(s) will apply to those wastewater streams which appear to be covered by both regulations. For example, if a plant performs coating operations in preparation for painting and also performs electroless plating as part of a porcelain enameling process, then these Part 433 standards would apply to discharges from the coating operation; while Part 466 (porcelain enameling) would apply to discharges from the second operation.

The following regulations will take precedence over metal finishing (Part 433) and electroplating (Part 413) when such an overlap occurs:

Nonferrous metal smelting and refining (40 CFR Part 421)
Coil coating (40 CFR Part 465)
Porcelain enameling (40 CFR Part 466)
Battery manufacturing (40 CFR Part 461)
Iron and steel (40 CFR Part 420)
Metal casting foundries (40 CFR Part 464)
Aluminum forming (40 CFR Part 467)
Copper forming (40 CFR Part 468)
Plastic molding and forming (40 CFR Part 463)

In addition, EPA is excluding from the metal finishing (Part 433) regulation: (1) Metallic platemaking and gravure cylinder preparation conducted within printing and publishing facilities; and (2) existing source job shops and independent printed circuit board manufacturers which introduce pollutants into a publicly owned treatment works. As noted above, the standards do not apply to facilities unless they perform at least one of the following: electroplating, electroless plating, anodiz-

ing, coating, chemical etching and milling, or printed circuit board manufacture.

The most important pollutants of concern found in metal finishing industry wastewaters are: (1) toxic metals (cadmium, copper, chromium, nickel, lead, and zinc); (2) cyanide; (3) toxic organics (lumped together as total toxic organics); and (4) conventional pollutants (TSS and oil and grease). These and other chemical constituents degrade water quality, endanger aquatic life and human health, and in addition corrode equipment, generate hazardous gas, and cause treatment plant malfunctions and problems in disposing of sludges containing toxic metals.

These plants manufacture a variety of products that are constructed primarily of metals. The operations, which involve materials that begin as raw stock (rods, bars, sheet, castings, forgings, etc.), can include the most sophisticated surface finishing technologies. These facilities include both captives and job shops. They vary greatly in size, age, number of employees, and number and type of operations performed. They range from very small job shops with less than 10 employees to large facilities employing thousands of production workers. Because of differences in size and processes, production facilities are custom tailored to the individual plant. Some complex products may require the choosing these pollutants included the frequency of their occurrence in water, their chemical stability and structure, the amount of the chemical produced, and the availability of chemical standards for measurement.

In addition to the original 129 toxic pollutants (of which three are now considered nonconventional pollutants), EPA checked for the presence, frequency, and concentration of xylenes, alkyl epoxides, gold, fluoride, phosphorus, oil and grease, TSS, pH, aluminum, barium, iridium, magnesium, molybdenum, osmium, palladium, platinum, rhodium, ruthenium, sodium, tin, titanium, vanadium, yttrium, and total phenols.

The criteria used to select plants for sampling visits were: (1) A large percentage of the plant's effluent discharge should result from the manufacturing processes listed in Appendix C; (2) the physical layout of plant plumbing should facilitate sampling of the wastewater type under study; (3) the plant must have waste treatment in place; (4) the mix of plants visited should contain discharges to both surface waters and publicaly owned treatment works; and (5) the selected plants should provide a representative geographical distribution to avoid a data base that concentrates on a unique geographical condition. EPA sampled 210 facilities to identify pollutants in plant wastewaters. Before visiting a plant, EPA reviewed all available data on manufacturing processes and waste treatment. We selected representative points at which to sample the raw wastewater entering the treatment systems and the final treated effluents. Finally, we prepared, reviewed, and approved a detailed sampling plan showing the selected sample points and the overall sampling procedure.

Based on this sampling plan, we then took samples at each sample point for 1, 2 or 3 consecutive days. The samples were divided into two analytical groups. Within each group the samples were subjected to various analyses, depending on the stability of the pollutants to be analyzed. The various levels of analysis were conducted at: (1) Local laboratories, (2) EPA's Chicago laboratory, (3) contracted gas chromatography/mass spectrometry (GC/MS) laboratories, and (4) the sampling contractor's central laboratory. The sampling and analysis methods are outlined in the Development Document.

The acquisition, preservation, and analysis of the water samples followed the relevant methods set forth in 40 CFR 136. Although the Agency has not promulgated analytical methods for many organic toxic pollutants under Section 304(h) of the Act, a number of these methods have been proposed for 40 CFR 136 (44 FR 69464, December 3, 1979; 44 FR 75028, December 18, 1979).

VI. Industry Subcategorization

In developing this regulation, the Agency considered whether different effluent limitations and standards are appropriate for different segments of the metal finishing industry. The Act requires EPA to consider a number of factors to determine if subcategorization is needed. These factors include raw materials, final products, manufacturing processes, geographical location, plant size and age, wastewater characteristics, non-water-quality environmental impacts, treatment costs, energy costs, and solid waste generation.

The metal finishing industry comprises 45 unit operations. These processes generate wastewater that falls into five waste groups, each requiring different treatment to reduce the discharge of pollutants. The five groups are metals, cyanide, hexavalent chromium, oils, and solvents, with significant toxic organics pollutants potentially present in the last two.

These wastes occur in a wide variety of combinations. Throughout the industry, however the wastestreams are alike in one critical sense; they all respond similarly to the treatment system which is already most widely used in the industry. That system was selected as EPA's model technology. Its major components, i.e., precipitation and clarification, are used for all waste streams. After isolated treatment of hexavalent chromium, cyanide, and oil and grease, pollutants in these waste streams are further reduced by passage through the precipitation-clarification system which is also used for metal-bearing wastes.

The Agency has determined that the Metal Finishing Point Source Category need not be subcategorized for regulation. A set of concentration based limitations, based on the performance capabilities of the model technology, can be applied to all metal finishing process effluents.

EPA has, however decided to exempt indirect discharging job shops and independent printed circuit board manufacturers

from the Part 433 PSES. This has an effect similar to placing them in a separate subcategory. As noted above, this is consistent with the 1980 Settlement Agreement in which the National Association of Metal Finishers promised to withdraw its legal challenge to those Part 413 PSES if EPA did not, for the next several years, make them significantly more stringent.

The Agency considered, but decided against production based standard. With the wide range of operations, product quality requirements, existing process configurations, and difficulties in measuring production, no consistent production normalizing relationship could be found. Concentration based limits, however, can be consistently attained throughout the industry.

VII. Available Wastewater Control and Treatment Technology

A. Status of In-Place Technology

Installed control and treatment technologies in the metal finishing industry generally consist of some form of alkaline precipitation and clarification installed at "end-of-pipe" to remove metals. When cyanide or hexavalent chromium wastes are present, these wastewaters are generally segregated and treated upstream

B. Control Treatment Options

We examined the following control treatment options:

Option 1: Precipitation and clarification. Stream segregation for cyanide, hexavalent chromium and concentrated oily wastes followed by cyanide destruction, chromium reduction and emulsion breaking skimming as necessary. Solvent waste segregation and removal by hauling.

Option 2: Option 1 plus filtration.

Option 3: Option 1 plus in-plant control for cadmium.

VIII. General Criteria for Effluent Limitations

A. BPT Effluent Limitations

The factors considered in defining best practicable control technolgy currently available (BPT) include: (1) The total cost of applying the technology relative to the effluent reductions that result, (2) the age of equipment and facilities involved, (3) the processes used, (4) engineering aspects of the control technology, (5) process changes, (6) non-water-quality environmental impacts (including energy requirements), (7) and other factors, as the Administrator considers appropriate. In general, the BPT level represents the average of the best existing performances of plants within the industry of various ages, sizes, processes, or other common characteristics. When existing performance is uniformly inadequate, BPT may be transferred from a different subcategory or category. BPT focuses on end-of-pipe treatment rather than process changes or internal controls, except when these technologies are common industry practice.

The cost/benefit inquiry for BPT is a limited balancing of costs versus benefits, committed to EPA's discretion, which does not require the Agency to quantify benefits in monetary terms. See e.g., *American Iron and Steel Institute* v. *EPA,* 528 F. 2d 1027 (3rd Cir. 1975). In balancing costs against the benefits of effluent reduction, EPA considers the volume and nature of existing discharges, the volume and nature of discharges expected after application of BPT, the general environmental effects of the pollutants, and the cost and economic impacts of the required level of pollution control. The Act does not require or permit consideration of water quality problems attributable to particular point sources, or water quality improvements in particular bodies of water. Therefore, EPA has not considered these factors. See *Weyerhaeuser Company* v. *Costle,* 590 F. 2d 1011 (D.C. Cir. 1978).

B. BAT Effluent Limitations

The factors considered in defining best available technology economically achievable (BAT) include the age of the equipment and facilities involved, the processes used, engineering aspects of the control technology, process changes, non-water-quality environmental impacts (including energy requirements), and the costs of applying such technology (Section 304(b)(2)(B)). The BAT level represents the best economically achievable performance of plants of various ages, sizes, processes, or other shared characteristics. As with BPT, uniformly inadequate performance within a category or subcategory may require transfer of BAT from a different subcategory or category. Unlike BPT, however, BAT may include process changes or internal controls, even when these technologies are not common industry practice.

The statutory assessment of BAT "considers" costs, but does not require a balancing of costs against effluent reduction benefits (see *Weyerhaeuser* v. *Costle, supra*). In developing BAT, however, EPA has given substantial weight to the reasonableness of costs. The Agency has considered the volume and nature of discharges, the volume and nature of discharges expected after application of BAT, the general environmental effects of the pollutants, and the costs and economic impacts of the required pollution control levels.

Despite this expanded consideration of costs, the primary factor for determining BAT is the effluent reduction capability of the control technology. The Clean Water Act of 1977, establishes the achievement of BAT as the principal national means of controlling toxic water pollution from direct discharging plants.

C. BCT Effluent Limitations

The 1977 amendments added Section 301(b)(2)(E) to the Act, establishing "best conventional pollutant control tech-

nology" (BCT) for discharges of conventional pollutants from existing industrial point sources. Section 304(B)(4) specified the following as conventional pollutants: BOD, TSS, fecal coliform, and pH. The Administrator designated oil and grease as "conventional" on July 30, 1979, 44 FR 44501.

BCT is not an additional limitation but replaces BAT for the control of conventional pollutants. In addition to other factors specified in section 304(b)(4)(B), the Act requires that BCT limitations be assessed in light of a two part "cost-reasonableness" test. *American Paper Institute* v. *EPA,* 660 F. 2d 954 (4th Cir. 1981). The first test compares the cost for private industry to reduce its conventional pollutants with the costs to publicly owned treatment works for similar levels of reduction in their discharge of these pollutants. The second test examines the cost-effectiveness of additional industrial treatment beyond BPT. EPA must find that limitations are "reasonable" under both tests before establishing them as BCT. In no case may BCT be less stringent than BPT.

EPA published its methodology for carrying out the BCT analysis on August 29, 1979, (44 FR 50732). In the case mentioned above, the Court of Appeals ordered EPA to correct data errors underlying EPA's calculation of the first test, and to apply the second cost test. (EPA had argued that a second cost test was not required).

BCT limitations for this industry were proposed on October 29, 1982 (47 FR 49176). They were accompanied by a proposed methodology for the general development of BCT limitations. BCT limits for this industry will be promulgated with, or soon after, the promulgation of the final methodology for BCT development. At that time EPA will respond to relevant comments filed in either that rulemaking or in this one.

D. New Source Performance Standards

The basis for new source performance standards (NSPS) under Section 306 of the Act is the best available demonstrated

technology. New plants have the opportunity to design the best and most efficient metal finishing processes and wastewater treatment technologies. Therefore, Congress directed EPA to consider the best demonstrated process changes, in-plant controls, and end-of-pipe treatment technologies that reduce pollution to the maximum extent feasible.

E. Pretreatment Standards for Existing Sources

Section 307(b) of the Act requires EPA to promulgate pretreatment standards for existing sources (PSES), which industry must achieve within three years of promulgation. PSES are designed to prevent the discharge of pollutants which pass through, interfere with, or are otherwise incompatible with the operation of POTW's.

The legislative history of the 1977 Act indicates that pretreatment standards are to be technology-based, analogous to the best available technology for removal of toxic pollutants. The General Pretreatment Regulations which serve as the framework for the final metal finishing pretreatment standards are in 40 CFR Part 403, 46 FR 9404 (January 28, 1981).

EPA has generally determined that there is pass through of pollutants if the percent of pollutants removed by a well-operated POTW achieving secondary treatment is less than the percent removal by the BAT model treatment system. A study of 40 well-operated POTW's with biological treatment and meeting secondary treatment criteria showed that regulated metals are typically removed at rates varying from 20 to 70%. POTWs with only primary treatment have even lower rates of removal. In contrast, BAT level treatment by metal finishing industrial facilities can achieve removals of approximately 97% or more. Thus it is evident that metals from this industry do pass through POTW's. As for toxic organics, data from the same POTWs illustrate a wide range of removal, from 0 to greater than 99%. Overall POTW's have removal rates of toxic organics which are less effective than the metal finishing TTO

technology basis of no dumping of toxic organic wastes. The POTW's effluent discharge of specific toxic pollutants ranged from 0 to 4.3 milligrams/liter. Many of the pollutants present in metal finishing wastes, at sufficiently high concentrations, can inhibit biodegradation in POTW operations. In addition, a high concentration of toxic pollutants in the sludge can limit POTW use of sludge management alternatives, including the beneficial use of sludges on agricultural lands.

Section 307 of the Clean Water Act provides that POTW's may grant credit to indirect dischargers, based on the degree of removal actually achieved at the POTW. EPA has General Pretreatment Regulations regulating POTW's authority to grant such credits.

A Federal Register notice of September 28, 1982 explained EPA's latest data and proposed national removal credits for well operated POTW's achieving the national secondary treatment limits. See 47 FR 42698. That proposal is not being relied on in this rulemaking; however if such credits are available the costs of today's standards could be substantially reduced.

F. Pretreatment Standards for New Sources

Section 307(c) of the Act requires EPA to promulgate pretreatment standards for new sources (PSNS) at the same time that it promulgates NSPS. These standards are intended to prevent the discharge of pollutants which pass through, interfere with, or are otherwise incompatible with a POTW. New indirect dischargers, like new direct dischargers, have the opportunity to incorporate the best available demonstrated technologies—including process changes, in-plant controls, and end-of-pipe treatment technologies—and to select plant sites that ensure the treatment system can be adequately installed. Therefore, the Agency sets PSNS after considering the same criteria considered for NSPS. PSNS will have effluent reduction benefits similar to NSPS.

IX. Summary of Final Regulations

In the electroplating/metal finishing industry, the pollu tants of concern are cadmium, chromium, copper, lead, nicke silver, zinc, cyanide, toxic organics, TSS, oil and grease, an pH. The treatment option selected for each effluent limitatio pretreatment standard and new source performance standard based on the criteria specified in the Clean Water Act. Th technologies are discussed in more detail in the Developme Document for this rulemaking.

A. Part 433

The pollutants being regulated under BPT limitations a cadmium, copper, chromium, nickel, lead, silver, zinc, tot cyanide, TSS, oil and grease and pH. Total toxic organi (TTO) is also being regulated. Compliance with the TTO lim basically involves not dumping concentrated toxic organ wastes, e.g., solvent degreasers and paint strippers. Oth sources are generally small, infrequent, and of low concentra tions.

For BPT, EPA is setting limits achievable by technolog based on precipitation and clarification for all metal finishin effluents. In addition, for cyanide or hexavalent chromium th technology basis incorporates techniques to destroy cyanide an reduce hexavalent chromium to its trivalent state. Thes effluent limitations reflect the average of the best existin control technologies widely used in the industry and remov approximately 97.6 percent of the raw waste of toxic metals an cyanide, and 99 percent of the toxic organics discharged. Th technology is consistent with that used as a basis for PSES fo the electroplating industry (January 28, 1981, 40 FR 9462) an the March 28, 1974, suspended, BPT limitations. The limita tions are derived in the manner discussed in the followin section. They are generally more stringent than those found i currently effective electroplating pretreatment regulations, be cause EPA is now using a revised and updated data base.

For BAT, EPA is establishing limitations for the toxic pollutants and at a level equivalent to BPT. The Agency seriously considered setting BAT and BAT-level PSES limitations based on BPT level technology plus filtration. Filtration would have led to an additional capital cost of almost $1.2 billion. In light of the statutory mandate to consider cost in setting BAT, EPA decided to reject the filtration option, because of its very high aggregate cost on a nationwide basis. We did not select in-plant cadmium control because it can require significant re-engineering of process water flow and of product and equipment handling, on a plant-by-plant basis. The changes vary widely and in many cases could be difficult for existing plants to apply. The compliance date for BAT is no later than July 1, 1984, the maximum time allowed by the Act.

For NSPS, EPA is establishing limitations based on BPT/BAT technology plus in-plant control of cadmium. This additional control takes advantage of a new plant's ability to achieve effluent reductions of 69% beyond BAT cadmium levels. The pollutants regulated under NSPS are the same as those regulated under BPT limitations.

For PSES in the Metal Finishing Category, limitations are based on technology equivalent to BAT and BPT. The pollutants regulated under this PSES are the same as the toxic pollutants regulated under BPT (BAT) limitations. A study of 40 well-operated POTWs with biological treatment and meeting secondary treatment criteria showed that regulated metals and cyanide are typically removed at rates varying from 20 to 70%. POTWs with primary treatment have even lower rates of removal. In contrast, metal finishing PSES-level treatment can achieve removals of approximately 97%. Thus it is evident that metals and cyanide from this industry do pass through POTWs. As for toxic organics, data from the same POTWs illustrates a wide range of removal, from 0% to greater than 99%. Overall POTWs have removal rates of toxic organics which are less effective than the metal finishing TTO technology basis of no

dumping of toxic organic wastes. The POTWs effluent discharge of specific toxic pollutants ranged from 0 to 4.3 mg/l. Many of the pollutants present in metal finishing wastes at sufficiently high concentrations can inhibit biodegradation in POTW operations. In addition, a high concentration of toxic pollutants in the sludge can limit POTW use of sludge management alternatives, including the beneficial use of sludges on agricultural lands.

The compliance date for the metal finishing PSES is February 15, 1986 for metals, cyanide, and TTO. Agency analysis indicates that facilities can plan, design, and install the necessary equipment in 31 months, which will be allowed by the specified compliance date. There is also a June 30, 1984 compliance date for an interim toxic organic limit, which can be met by in-house management and handling controls.

For PSNS, limitations are based on technology equivalent to NSPS. The pollutants regulated under PSNS are the same as the toxics regulated under NSPS. As with PSES, these pollutants are necessary for control in PSNS to prevent pass through, interference, and sludge contamination.

* * * * *

XVII. Variances and Modifications

Federal and State NPDES permits to direct dischargers must enforce these effluent standards. The pretreatment limitations apply directly to indirect dischargers.

The only exception to the BPT effluent limitations is EPA's "fundamentally different factors" variance. See *E. I. duPont de Nemours and Co.* v. *Train, supra; Weyerhaeuser Co.* v. *Costle, supra.* This variance recognizes characteristics of a particular discharger in the category regulated that are fundamentally different from the characteristics considered in this rulemaking. Although this variance clause was set forth in EPA's 1973-1976 industry regulations, it need not be included in this regulation. See 40 CFR Part 125.30.

Dischargers subject to the BAT limitations are also eligible for EPA's "fundamentally different factors" variance. BAT limitations for nonconventional pollutants may be modified under Sections 301(c) and 301(g) of the Act. These statutory modifications do not apply to toxic or conventional pollutants. According to Section 301(j)(1)(B), applications for these modifications must be filed within 270 days after promulgation of final effluent limitations and standards. See 43 FR 40859 (Sept. 13, 1978). These Part 413 and Part 433 regulations do not regulate any non-conventional, non-toxic, pollutants. If any of the regulated pollutants are declared non-toxic, and non-conventional in the future, then dischargers may seek 301(c) or 301(g) modifications.

Indirect dischargers subject to PSES are eligible for the "fundamentally different factors" variance and for credits for toxic pollutants removed by POTW. See 40 CFR 403.7; 403.13; 46 FR 9404 (January 28, 1981). Indirect dischargers subject to PSNS are only eligible for the credits provided for in 40 CFR 403.7. New sources subject to NSPS are not eligible for EPA's "fundamentally different factors" variance or any statutory or regulatory modifications. See *E. I. duPont de Nemours* v. *Train, supra.*

XVIII. Implementation of Limitations and Standards

* * * * *

B. Indirect Dischargers

For indirect dischargers, PSES and PSNS are implemented under National Pretreatment Program procedures outlined in 40 CFR Part 403. The table below may be of assistance in resolving questions about the operation of that program. A brief explanation of some of the submissions indicated on the table follows:

A "request for category determination request" is a written request, submitted by an indirect discharger or its POTW, for a

certification on whether the indirect discharger falls within particular subcategory listed in a categorical pretreatment stan dard. This assists the indirect discharger in knowing just whic PSES or PSNS limits it will be required to meet. See 40 CF 403.6(a).

A "request for fundamentally different factors variance" a mechanism by which a categorical pretreatment standar may be adjusted, making it more or less stringent, on a case-by case basis. If an indirect discharger, a POTW, or any intereste person believes that factors relating to specific indirect di charger are fundamentally different from those factors consid ered during development of the relevant categorical pre treatment standard and that the existence of those factor justifies a different discharge limit from that specified in th categorical standard, then they may submit a request to EP for such a variance. See 40 CFR 403.13.

A "baseline monitoring report" is the first report a indirect discharger must file following promulgation of a stan dard applicable to it. The baseline report includes: an id dentification of the indirect discharger; a description of i operations; a report on the flows of regulated streams and th results of sampling analyses to determine levels of regulate pollutants in those streams; a statement of the discharger compliance or noncompliance with the standard; and a descrip tion of any additional steps required to achieve compliance See 40 CFR 403.12(b)

A "report on compliance" is required of each indire discharger within 90 days following the date for compliance with an applicable categorical pretreatment standard. Th report must indicate the nature and concentration of all regu lated pollutants in the facility's regulated process wastestream the average and maximum daily flows of the regulated stream and a statement of whether compliance is consistently bein achieved, and if not, what additional operation and mainte nance and/or pretreatment is necessary to achieve compliance See 40 CFR 403.12(d)

A "periodic compliance report" is a report on continuing compliance with all applicable categorical pretreatment standards. It is submitted twice per year (June and December) by indirect dischargers subject to the standards. The report shall indicate the precise nature and concentrations of the regulated pollutants in its discharge to the POTW; the average and maximum daily flow rates of the facility; the methods used by the indirect discharger to sample and analyze the data, and a certification that these methods conformed to those methods outlined in the regulations. See 40 CFR 403.12(e)

TABLE 2.—INDIRECT DISCHARGER SCHEDULE FOR SUBMITTAL AND COMPLIANCE

Item/event	Applicable—sources	Date or time period	Measured from	Item submitted to
Request for category determination	Existing ...	60 days.....	From effective date of standard.	Director[1]
		or 60 days	From FEDERAL REGISTER Development Document Availability.	
	New.....	Prior to commencement of discharge to POTW.		
Request for fundamentally different factors variance	All	180 days.....	From effective date of standard.	Director.[1]
		or 30 days	From final decision on category determination.	
Baseline monitoring report.....	All	180 days.....	From effective date of standard or final decision on category determination.	Control authority[2]
Report on compliance	Existing ...	90 days.....	From date for final compliance.	Control authority.[2]
	New.....	90 days.....	From commencement of discharge to POTW.	
Periodic Compliance Reports	All	June and December.		Control authority.[2]

[1] Director = a) Chief Administrative Officer of a State water pollution control agency with an approved pretreatment program or b) EPA Regional Water Division Director, if State does not have an approved pretreatment program.

[2] Control Authority = a) POTW if its pretreatment program has been approved or b) Director of State water pollution control agency with an approved pretreatment program or c) EPA Regional Administrator, if State does not have an approved pretreatment program.

C. Applicability and Compliance Dates

In the electroplating/metal finishing industry some facilities are subject to the Electroplating Category (Part 413) and/or the Metal Finishing Category (Part 433). Table 3 below illustrates which of the regulations are applicable to the various types of facilities. Facilities are subject only to Part 433 (metal finishing) for BPT, BAT, NSPS, and PSNS. For PSES, facilities generally fall within the applicability of both Parts, although, for each pollutant, only one Part will apply at a given time. There are two exceptions: (1) Existing indirect discharging job shops and IPCBMs have been exempted from the Part 433 Metal Finishing PSES, and (2) metal finishing wastewaters at iron and steel mills are exempted from the Part 413 Electroplating PSES.

TABLE 3.—APPLICABILITY

	Job shops	IPCBM	Captives	Metal finishing at iron and steel mills[1]
PSES:				
Electroplating (Part 413).....	x.....	x.....	x.....	
Metal Finishing (Part 433)....	.....	.....	x.....	x.....
BPT, BAT, NSPS, PSNS:				
Metal Finishing.....	x.....	x.....	x.....	x.....

[1] Electroplating process wastewater at iron and steel mills was excluded from the Electroplating PSES by 40 CFR 413.Q1. Flows from the metal finishing processes at those plants are covered by 40 CFR 433.

The compliance dates for the two categories are presented in Table 4. BPT, BAT, PSNS, and NSPS compliance dates are specified by the Clean Water Act. The compliance dates for Electroplating PSES were set in the Federal Register on

September 28, 1982. See 47 FR 42698. Today's regulation allows facilities 3 years to comply with the Electroplating PSES for toxic organics consistent with the Settlement Agreement with NAMF. For metal finishing, the Agency is allowing 31 months for compliance with all parameters. In addition an interim TTO limit has been established for compliance by June 30, 1984; except for metal finishing wastewaters from plants which are also subject to Part 420 (iron and steel), which must comply by July 10, 1985. This last exception is pursuant to a settlement agreement with the steel industry in which EPA agreed that pretreatment requirements would apply to steel discharges in July 1985. It is possible that control of TTO in metal finishing waste streams could, in some cases, lead steel facilities to install treatment technology on the discharge from their steel processes. Therefore, EPA has decided to allow plants covered by Part 420 until June, 1985 to comply with the TTO limit.

TABLE 4.—COMPLIANCE DATES

Regulation	Compliance date
Electroplating PSES for	April 27, 1984 (for nonintegrated plants).
Metals and Cyanide (Part 413)...	June 30, 1984 (for integrated plants).
Electroplating PSES (Part 413) for TTO[2]	July 15, 1986.
Metal Finishing BPT (Part 433).	As soon as possible.
Metal Finishing BAT.	July 1, 1984.
Metal Finishing PSES for TTO[1]	June 30, 1984 (except for plants covered by Part 420); July 10, 1985 (for plants covered by Part 420).
Metal Finishing PSES for Metals, Cyande and TTO[2]	February 15, 1986.
Metal Finishing NSPS and PSNS.	From commencement of discharge.

[1] For these facilities the first TTO limit is based on management practices only.

[2] Thus TTO limit is based on management practices followed by percipitation/clarification.

D. Enforcement

A final topic of concern is the operation of EPA's enforcement program. This was an important consideration in developing this regulation. EPA deliberately sought to avoid standards which would be exceeded by routine fluctuations of well-designed and operated treatment systems. These standards were developed so as to represent limits which such a plant would meet approximately 99% of the time.

The Clean Water Act is a strict liability statute. EPA emphasizes, however, that it can exercise discretion in deciding to initiate enforcement proceedings (*Sierra Club* v. *Train*, 557

F. 2d 485, 5th Cir., 1977). EPA has exercised, and intends t
exercise, that discretion in a manner that recognizes an
promotes good-faith compliance.

* * * * *

PART 433—METAL FINISHING POINT SOURCE CATEGORY

Subpart A—Metal Finishing Subcategory

Sec.

433.10 Applicability; description of the metal finishing poi
source category.

433.11 Specialized definitions.

433.12 Monitoring requirements.

433.13 Effluent limitations representing the degree
effluent reduction attainable by applying the be
practicable control technology currently availabl
(BPT).

433.14 Effluent limitations representing the degree
effluent reduction attainable by applying the be
available technology economically achievabl
(BAT).

433.15 Pretreatment standards for existing sources (PSES)

433.16 New source performance standards (NSPS).

433.17 Pretreatment standards for new sources (PSN
).

433.18 [Reserved]

Authority: Sec. 301, 304(b), (c), (e), and (g), 306(b
and (c), 307(b) and (c), 308 and 501 of the Clean Water A
(the Federal Water Pollution Control Act Amendments
1971, as amended by the Clean Water Act of 1977) (th
"Act"); 33 U.S.C. 1311, 1314(b) (c), (e), and (g), 1316(b
and (c), 1317(b) and (c), 1318 and 1361; 86 Stat.816, Pub. L
92-500; 91 Stat. 1567, Pub. L. 95-217.

Subpart A—Metal Finishing Subcategory

§ 433.10 Applicability; description of the metal finishing point source category.

(a) Except as noted in paragraphs (b) and (c), of this section, the provisions of this subpart apply to plants which perform any of the following six metal finishing operations on any basis material; Electroplating, Electroless Plating, Anodizing, Coating (chromating, phosphating, and coloring), Chemical Etching and Milling, and Printed Circuit Board Manufacture. If any of those six operations are present, then this part applies to discharges from those operations and also to discharges from any of the following 40 process operations: Cleaning, Machining, Grinding, Polishing, Tumbling, Burnishing, Impact Deformation, Pressure Deformation, Shearing, Heat Treating, Thermal Cutting, Welding, Brazing, Soldering, Flame Spraying, Sand Blasting, Other Abrasive Jet Machining, Electric Discharge Machining, Electrochemical Machining, Electron Beam Machining, Laser Beam Machining, Plasma Arc Machining, Ultrasonic Machining, Sintering, Laminating, Hot Dip Coating, Sputtering, Vapor Plating, Thermal Infusion, Salt Bath Descaling, Solvent Degreasing, Paint Stripping, Painting, Electrostatic Painting, Electropainting, Vacuum Metalizing, Assembly, Calibration, Testing, and Mechanical Plating.

(b) In some cases effluent limitations and standards for the following industrial categories may be effective and applicable to wastewater discharges from the metal finishing operations listed above. In such cases these Part 433 limits shall not apply and the following regulations shall apply:

Nonferrous metal smelting and refining (40 CFR Part 421)
Coil coating (40 CFR Part 465)
Porcelain enameling (40 CFR Part 466)
Battery manufacturing (40 CFR Part 461)

Iron and steel (40 CFR Part 420)
Metal casting foundries (40 CFR Part 464)
Aluminum forming (40 CFR Part 467)
Copper forming (40 CFR Part 468)
Plastic molding and forming (40 CFR Part 463)

(c) This Part does not apply to: (1) Metallic platemaking and gravure cylinder preparation conducted within printing and publishing facilities; and (2) existing indirect discharging job shops and independent printed circuit board manufacturers which are covered by 40 CFR Part 413.)

§ 433.11 Specialized definitions.

The definitions set forth in 40 CFR and the chemical analysis methods set forth in 40 CFR 136 are both incorporated herein by reference. In addition, the following definitions apply to this part:

(a) The term "T", as in "Cyanide, T", shall mean total.

(b) The term "A", as in "Cyanide A", shall mean amenable to alkaline Chlorination.

(c) The term "job shop" shall mean a facility which owns not more than 50% (annual area basis) of the materials undergoing metal finishing.

(d) The term "independent" printed circuit board manufacturer shall mean a facility which manufacturers printed circuit boards principally for sale to other companies.

(e) The term "TTO" shall mean total toxic organics, which is the summation of all quantifiable values greater than .01 milligrams per liter for the following toxic organics:

Acenaphthene
Acrolein
Acrylonitrile
Benzene
Benzidine

Carbon tetrachloride (tetrachloromethane)
Chlorobenzene
1,2,4-trichlorobenzene
Hexachlorobenzene
1,2-dichloroethane
1,1,1-trichloroethane
Hexachloroethane
1.1-dichloroethane
1,1,2-trichloroethane
1,1,2,2,-tetrachloroethane
Chloroethane
Bis (2-chloroethyl) ether
2-chloroethyl vinyl ether (mixed)
2-chloronaphthalene
2,4,6-trichlorophenol
Parachlorometa cresol
Chloroform (trichloromethane)
2-chlorophenol
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
N-nitrosodi-n-propylamine
Pentachlorophenol
Phenol
Bis (2 ethylhexyl) phthalate
Butyl benzyl phthalate
Di-n-butyl phthalate
Di-n-octyl phthalate
Diethyl phthalate
Dimethyl phthalate
1,2-benzanthracene
(benzo(a)anthracene)
Benzo(a)pyrene (3,4-benzopyrene)
3,4-Benzofluoranthene (benzo(b)fluoranthene)
11.12-benzofluoranthene
(benzo(k)fluoranthene)

Chrysene
Acenaphthylene
Anthracene
1,12-benzoperylene (benzo(ghi)perylene)
Fluorene
Phenanthrene
1,2,5,6-dibenzanthracene
(dibenzo(a.h)anthracene
Indeno(1,2,3-cd)pyrene(2,3-o-phenlene
pyrene)
Pyrene
Tetrachloroethylene
Toluene
Trichloroethylene
Vinyl chloride (chloroethylene)
3,3-dichlorobenzidine
1,1-dichloroethylene
1,2-trans-dichloroethylene
2,4-dichlorophenol
1,2-dichloropropane (1,3-dichloropropene)
2,4-dimethylphenol
2,4-dinitrotoluene
2,6-dinitrotoluene
1,2-diphenylhydrazine
Ethylbenzene
Fluoranthene
4-chlorophenyl phenyl ether
4-bromophenyl phenyl ether
Bis(2-chloroisopropyl) ether
Bis(2-chloroethoxy) methane
Methylene chloride (dichloromethane)
Methyl chloride (chloromethane)
Methyl bromide (bromomethane)
Bromoform (tribromomethane)
Dichlorobromomethane
Chlorsdibromomethane

Hexachlorobutadiene
Hexachlorocyclopentadiene
Isophorone
Naphthalene
Nitrobenzene
2-nitrophenol
4-nitrophenol
2,4-dinitrophenol
4,6-dinitro-o-cresol
N-nitrosodimethylamine
N-nitrosodimethylamine
Aldrin
Dieldrin
Chlordane (technical mixture and metabolites)
4,4-DDT
4,4-DDE (p,p.-DDX)
4,4-DDD (p,p-TDE)
Alpha-endosulfan
Beta-endosulfan
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide (BHC-hexachlorocyclohexane)
Alpha-BHC
Beta-BHC
Gamma -BHC
Delta-BHC
(PCB-polychlorinated biphenyls)
PCB-1242 (Arochlor 1242)
PCB-1254 (Arochlor 1254)
PCB-1221 (Arochlor 1221)
PCB-1232 (Arochlor 1232)
PCB-1248(Arochlor 1248)
PCB-1260 (Arochlor 1260)
PCB-1016 (Arochlor 1016)

Toxaphene
2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)

§ 433.12 Monitoring requirements.

(a) In lieu of requiring monitoring for TTO, the permitting authority (or, in the case of indirect dischargers, the control authority) may allow dischargers to make the following certification statement: "Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation [or pretreatment standard] for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the permitting [or control] authority." For direct dischargers, this statement is to be included as a "comment" on the Discharge Monitoring Report required by 40 CFR 122.44(i), formerly 40 CFR 122.62(i). For indirect dischargers, the statement is to be included as a comment to the periodic reports required by 40 CFR 403.12(e). If monitoring is necessary to measure compliance with the TTO standard, the industrial discharger need analyse for only those pollutants which would reasonably be expected to be present.

(b) In requesting the certification alternative, a discharger shall submit a solvent management plan that specifies to the satisfaction of the permitting authority (or, in the case of indirect dischargers, the control authority) the toxic organic compounds used; the method of disposal used instead of dumping, such as reclamation, contract hauling, or incineration; and procedures for ensuring that toxic organics do not routinely spill or leak into the wastewater. For direct dischargers, the permitting authority shall incorporate the plan as a provision of the permit.

(c) Self-monitoring for cyanide must be conducted after cyanide treatment and befor dilution with other streams. Alternatively, samples may be taken of the final effluent, if the plant limitations are adjusted based on the dilution ratio of the cyanide waste stream flow to the effluent flow.

§ 433.13 Effluent limitations representing the degree of effluent reduction attainable by applying the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30-32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by applying the best practicable control technology currently available (BPT):

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.69	0.26
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	
Oil & Grease	52	26
TSS	60	31
pH	(1)	(1)

[1] Within 6.0 to 9.0.

(b) Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to those limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

(c) No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

§ 433.14 Effluent limitations representing the degree of effluent reduction attainable by applying the best available technology economically achievable (BAT).

(a) Except as provided in 40 CFR 125.30-32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by applying the best available technology economically achievable (BAT):

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.69	0.26
Chromium (T)	2.77	1.71

BAT EFFLUENT LIMITATIONS—CONTINUED

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	

(b) Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to those limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

(c) No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

§ 433.15 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for existing sources (PSES):

PSES FOR ALL PLANTS EXCEPT JOB SHOPS AND INDEPENDENT PRINTED CIRCUIT BOARD MANUFACTURERS

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.69	0.26
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	

(b) Alternatively, for industrial facilities with cyanide treatment, upon agreement between a source subject to those limits and the pollution control authority. The following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

(c) No user introducing wastewater pollutants into a publicly owned treatment works under the provisions of this subpart shall augment the use of process wastewater as a partial or total substitute for adequate treatment to achieve compliance with this standard.

(d) An existing source submitting a certification in lieu of monitoring pursuant to § 433.12 (a) and (b) of this regulation must implement the solvent management plan approved by the control authority.

(e) An existing source subject to this subpart shall comply with a daily maximum pretreatment standard for TTO of 4.57 mg/l.

(f) Compliance with the provisions of paragraph (c), (d), and (e) of this section shall be achieved as soon as possible, but not later than June 30, 1984, however metal finishing facilities which are also covered by Part 420 (iron and steel) need not comply before July 10, 1985.[1] Compliance with the provisions of paragraphs (a), (b), (c) and (d) of this section shall be achieved as soon as possible, but not later than February 15, 1986.[1]

---

[1] The Consent Decree in *NRDC* v. *Train,* 12 ERC 1833 (D.D.C. 1979) specifies a compliance date for PSES of no later than June 30, 1984. EPA has moved for a modification of that provision of the Decree. Should the Court deny that motion, EPA will be required to modify this compliance date accordingly.

§ 433.16 New source performance standards (NSPS).

(a) Any new source subject to this subpart must achieve the following performance standards:

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.11	0.07
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	
Oil and Grease	52	26
TSS	60	31
pH	(1)	(1)

1 Within 6.0 to 9.0.

(b) Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to those limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

(c) No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

§ 433.17 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for new sources (PSNS):

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.11	0.07
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	

(b) Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to these limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

(c) No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

(d) An existing source submitting a certification in lieu of monitoring pursuant to § 433.12 (a) and (b) of this regulation must implement the solvent management plan approved by the control authority.

§ 433.18 [Reserved]

[C.]

PERTINENT PROVISIONS OF CLEAN WATER ACT

Section 301 (b) provides:

In order to carry out the objective of this chapter there shall be achieved—

(1)(A) not later than July 1, 1977, effluent limitations for point sources, other than publicly owned treatment

works, (i) which shall require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 1314(b) of this title, or (ii) in the case of a discharge into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, which shall require compliance with any applicable pretreatment requirements and any requirements under section 1317 of this title; and

(B) for publicly owned treatment works in existence on July 1, 1977, or approved pursuant to section 1283 of this title prior to June 30, 1974 (for which construction must be completed within four years of approval), effluent limitations based upon secondary treatment as defined by the Administrator pursuant to section 1314(d)(1) of this title; or,

(C) not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title) or any other Federal law or regulation, or required to implement any applicable water quality standard established pursuant to this chapter.

(2)(A) for pollutants identified in subparagraphs (C), (D), and (F) of this paragraph, effluent limitations for categories and classes of point sources, other than publicly owned treatment works, which (i) shall require application of the best available technology economically achievable for such category or class, which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(2) of this title, which such effluent limitations shall require the elimination of dis-

charges of all pollutants if the Administrator finds, on the basis of information available to him (including information developed pursuant to section 1325 of this title), that such elimination is technologically and economically achievable for a category or class of point sources as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(2) of this title, or (ii) in the case of the introduction of a pollutant into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, shall require compliance with any applicable pretreatment requirements and any other requirement under section 1317 of this title;

* * * *

[D.]

Section 304(b) provides:

(b) For the purpose of adopting or revising effluent limitations under this chapter the Administrator shall, after consultation with appropriate Federal and State agencies and other interested persons, published within one year of October 18, 1972, regulations, providing guidelines for effluent limitations, and, at least annually thereafter, revise, if appropriate, such regulations. Such regulations shall—

(1)(A) identify, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, the degree of effluent reduction attainable through the application of the best practicable control technology currently available for classes and categories of point sources (other than publicly owned treatment works); and

(B) specify factors to be taken into account in determining the control measures and practices to be applicable to point sources (other than publicly owned

treatment works) within such categories or classes. Factors relating to the assessment of best practicable control technology currently available to comply with subsection (b)(1) of section 1311 of this title shall include consideration of the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application, and shall also take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate;

(2)(A) identify, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, the degree of effluent reduction attainable through the application of the best control measures and practices achievable including treatment techniques, process and procedure innovations, operating methods, and other alternatives for classes and categories of point sources (other than publicly owned treatment works); and

(B) specify factors to be taken into account in determining the best measures and practices available to comply with subsection (b)(2) of section 1311 of this title to be applicable to any point source (other than publicly owned treatment works) within such categories or classes. Factors relating to the assessment of best available technology shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality enviornmental impact (including energy requirements), and such other factors as the Administrator deems appropriate;

(3) identify control measures and practices available to eliminate the discharge of pollutants from categories and classes of point sources, taking into account the cost of achieving such elimination of the discharge of pollutants; and

(4)(A) identify, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, the degree of effluent reduction attainable through the application of the best conventional pollutant control technology (including measures and practices) for classes and categories of point sources (other than publicly owned treatment works); and

(B) specify factors to be taken into account in determining the best conventional pollutant control technology measures and practices to comply with section 1311(b)(2)(E) of this title to be applicable to any point source (other than publicly owned treatment works) within such categories or classes. Factors relating to the assessment of best conventional pollutant control technology (including measures and practices) shall include consideration of the reasonableness of the relationship between the costs of attaining a reduction in effluents and the effluent reduction benefits derived, and the comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources, and shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate.

[E.]

Section 307(b) provides:

(b)(1) The Administrator shall, within one hundred and eighty days after October 18, 1972, and from time to time thereafter, publish proposed regulations establishing pretreatment standards for introduction of pollutants into treatment works (as defined in section 1292 of this title) which are publicly owned for those pollutants which are determined not to be susceptible to treatment by such treatment works or which would interfere with the operation of such treatment works. Not later than ninety days after such publication, and after opportunity for public hearing, the Administrator shall promulgate such pretreatment standards. Pretreatment standards under this subsection shall specify a time for compliance not to exceed three years from the date of promulgation and shall be established to prevent the discharge of any pollutant through treatment works (as defined in section 1292 of this title) which are publicly owned, which pollutant interferes with, passes through, or otherwise is incompatible with such works. If, in the case of any toxic pollutant under subsection (a) of this section introduced by a source into a publicly owned treatment works, the treatment by such works removes all or any part of such toxic pollutant and the discharge from such works does not violate that effluent limitation or standard which would be applicable to such toxic pollutant if it were discharged by such source other than through a publicly owned treatment works, and does not prevent sludge use or disposal by such works in accordance with section 1345 of this title, then the pretreatment requirements for the sources actually discharging such toxic pollutant into such publicly owned treatment works may be revised by the owner or operator of such works to reflect the removal of such toxic pollutant by such works.

(2) The Administrator shall, from time to time, as control technology, processes, operating methods, or other alternatives

change, revise such standards following the procedure established by this subsection for promulgation of such standards.

(3) When proposing or promulgating any pretreatment standard under this section, the Administrator shall designate the category or categories of sources to which such standard shall apply.

(4) Nothing in this subsection shall affect any pretreatment requirement established by any State or local law not in conflict with any pretreatment standard established under this subsection.

[F.]

40 C.F.R. § 403.13 provides:

(a) *Definition.* The term "Requester" means an Industrial User or a POTW or other interested person seeking a variance from the limits specified in a categorical Pretreatment Standard.

(b) *Purpose and scope.* In establishing categorical Pretreatment Standards for existing sources, the EPA will take into account all the information it can collect, develop and solicit regarding the factors relevant to pretreatment standards under section 307(b). In some cases, information which may affect these Pretreatment Standards will not be available or, for other reasons, will not be considered during their development. As a result, it may be necessary on a case-by-case basis to adjust the limits in categorical Pretreatment Standards, making them either more or less stringent, as they apply to a certain Industrial User within an industrial category or subcategory. This will only be done if data specific to that Industrial User indicates it presents factors fundamentally different from those considered by EPA in developing the limit at issue. Any interested person believing that factors relating to an Industrial User are fundamentally different from the factors considered during development of a categorical Pretreatment Standard

applicable to that User and further, that the existence of those factors justifies a different discharge limit from that specified in the applicable categorical Pretreatment Standard, may request a fundamentally different factors variance under this section or such a variance request may be initiated by the EPA.

(c) *Criteria*—(1) *General criteria.* A request for a variance based upon fundamentally different factors shall be approved only if:

(i) There is an applicable categorical Pretreatment Standard which specifically controls the pollutant for which alternative limits have been requested; and

(ii) Factors relating to the discharge controlled by the categorical Pretreatment Standard are fundamentally different from the factors considered by EPA in establishing the Standards; and

(iii) The request for a variance is made in accordance with the procedural requirements in paragraphs (g) and (h) of this section.

(2) *Criteria applicable to less stringent limits.* A variance request for the establishment of limits less stringent than required by the Standard shall be approved only if:

(i) The alternative limit requested is no less stringent than justified by the fundamental difference;

(ii) The alternative limit will not result in a violation of prohibitive discharge standards prescribed by or established under § 403.5;

(iii) The alternative limit will not result in a non-water quality environmental impact (including energy requirements) fundamentally more adverse than the impact considered during development of the Pretreatment Standards; and

(iv) Compliance with the Standards (either by using the technologies upon which the Standards are based or by using other control alternatives) would result in either:

(A) A removal cost (adjusted for inflation) wholly out of proportion to the removal cost considered during development of the Standards; or

(B) A non-water quality environmental impact (including energy requirements) fundamentally more adverse than the impact considered during development of the Standards.

(3) *Criteria applicable to more stingent limits.* A variance request for the establishment of limits more stringent than required by the Standards shall be approved only if:

(i) The alternative limit request is no more stringent than justified by the fundamental difference; and

(ii) Compliance with the alternative limit would not result in either;

(A) A removal cost (adjusted for inflation) wholly out of proportion to the removal cost considered during development of the Standards; or

(B) A non-water quality environmental impact (including energy requirements) fundamentally more adverse than the impact considered during development of the Standards.

(d) *Factors considered fundamentally different.* Factors which may be considered fundamentally different are:

(1) The nature or quality of pollutants contained in the raw waste load of the User's process wastewater;

(2) The volume of the User's process wastewater and effluent discharged;

(3) Non-water quality environmental impact of control and treatment of the User's raw waste load;

(4) Energy requirements of the application of control and treatment technology;

(5) Age, size, land availability, and configuration as they relate to the User's equipment or facilities; processes employed; process changes; and engineering aspects of the application of control technology;

(6) Cost of compliance with required control technology.

(e) *Factors which will not be considered fundamentally different.* A variance request or portion of such a request under this section may not be granted on any of the following grounds:

(1) The feasibility of installing the required waste treatment equipment within the time the Act allows:

(2) The assertion that the Standards cannot be achieved with the appropriate waste treatment facilities installed, if such assertion is not based on factors listed in paragraph (d) of this section;

(3) The User's ability to pay for the required waste treatment; or

(4) The impact of a Discharge on the quality of the POTW's receiving waters.

(f) *State or local law.* Nothing in this section shall be construed to impair the right of any state or locality under section 510 of the Act to impose more stringent limitations than required by Federal law.

(g) *Application deadline.* (1) Requests for a variance and supporting information must be submitted in writing to the Director or to the Enforcement Division Director, as appropriate.

(2) In order to be considered, request for variances must be submitted within 180 days after the effective date of the

categorical Pretreatment Standard unless the User has requested a categorical determination pursuant to § 403.6(a).

(3) Where the User has requested a categorical determination pursuant to § 403.6(a), the User may elect to await the results of the category determination before submitting a variance request under this section. Where the User so elects, he or she must submit the variance request within 30 days after a final decision has been made on the categorical determination pursuant to § 403.6(a)(4).

(h) *Contents of submission.* Written Submissions for variance request, whether made to the Enforcement Division Director or to the Director must include:

(1) The name and address of the person making the request;

(2) Identification of the interest of the Requester which is affected by the categorical Pretreatment Standard for which the variance is requested;

(3) Identification of the POTW currently receiving the waste from the Industrial User for which alternative discharge limits are requested;

(4) Identification of the categorical Pretreatment Standards which are applicable to the Industrial User;

(5) A list of each pollutant or pollutant parameter for which an alternative discharge limit is sought;

(6) The alternative discharge limits proposed by the Requester for each pollutant or pollutant parameter identified in paragraph (h)(5) of this section;

(7) A description of the Industrial User's existing water pollution control facilities;

(8) A schematic flow representation of the Industrial User's water system including water supply, process wastewater systems, and points of Discharge; and

(9) A Statement of facts clearly establishing why the variance request should be approved, including detailed support data, documentation, and evidence necessary to fully evaluate the merits of the request, e.g., technical and economic data collected by the EPA and used in developing each pollutant discharge limit in the Pretreatment Standard.

(i) *Deficient requests.* The Enforcement Division Director or Director will only act on written requests for variances that contain all of the information required. Persons who have made incomplete Submissions will be notified by the Enforcement Division Director or Director that their requests are deficient and unless the time period is extended, will be given up to 30 days to correct the deficiency. If the deficiency is not corrected within the time period allowed by the Enforcement Division Director or the Director, the request for a variance shall be denied.

(j) *Public notice.* Upon receipt of a complete request, the Director or Enforcement Division Director will provide notice of receipt, opportunity to review the submission, and opportunity to comment.

(1) The public notice shall be circulated in a manner designed to inform interested and potentially interested persons of the request. Procedures for the circulation of public notice shall include mailing notices to:

(i) The POTW into which the Industrial User requesting the variance discharges:

(ii) Adjoining States whose waters may be affected; and

(iii) Designated 208 planning agencies, Federal and State fish, shellfish and wildlife resource agencies; and to any other person or group who has requested individual notice, including those on appropriate mailing lists.

(2) The public notice shall provide for a period not less than 30 days following the date of the public notice during which time interested persons may review the request and submit their written views on the request.

(3) Following the comment period, the Director or Enforcement Division Director will make a determination on the request taking into consideration any comments received. Notice of this final decision shall be provided to the requestor (and the Industrial User for which the variance is requested if different), the POTW into which the Industrial User discharges and all persons who submitted comments on the request.

(k) *Review of requests by state.* (1) Where the Director finds that fundamentally different factors do not exist, he may deny the request and notify the requester (and Industrial User where they are not the same) and the POTW of the denial.

(2) Where the director finds that fundamentally different factors do exist, he shall forward the request, and a recommendation that the request be approved, to the Enforcement Division Director.

(l) *Review of requests by EPA.* (1) Where the Enforcement Division Director finds that fundamentally different factors do not exist, he shall deny the request for a variance and send a copy of his determination to the Director, to the POTW, and to the Requester (and to the Industrial User, where they are not the same).

(2) Where the Enforcement Division Director finds that fundamentally different factors do exist, and that a partial or full variance is justified, he will approve the variance. In approving the variance, the Enforcement Division Director will:

(i) Prepare recommended alternative discharge limits for the Industrial User either more or less stringent than those prescribed by the applicable categorical Pre-

treatment Standard to the extent warranted by the demonstrated fundamentally different factors;

(ii) Provide the following information in his written determination:

(A) the recommended alternative discharge limits for the Industrial User concerned:

(B) the rationale for the adjustment of the Pretreatment Standard (including the Enforcement Division Director's reasons for recommending that a fundamentally different factor variance be granted) and an explanation of how the Enforcement Division Director's recommended alternative discharge limits were derived;

(C) the supporting evidence submitted to the Enforcement Division Director; and

(D) other information considered by the Enforcement Division Director in developing the recommended alternative discharge limits;

(iii) Notify the Director and the POTW of his or her determination; and

(iv) Send the information described in paragraphs (1)(2) (i) and (ii) of this section to the Requestor (and to the Industrial User where they are not the same).

(m) *Request for hearing.* (1) Within 30 days following the date of receipt of notice of the Enforcement Division Director's decision on a variance request, the Requester or any other interested person may submit a petition to the Regional Administrator for a hearing to reconsider or contest the decision. If such a request is submitted by a person other than the Industrial User the person shall simultaneously serve a copy of the request on the Industrial User.

(2) If the Regional Administrator declines to hold a hearing and the Regional Administrator affirms the Enforcement Division Director's findings, the Requester may submit a petition for a hearing to the Administrator within 30 days of the Regional Administrator's decision.